

# 1.3

## Surface Areas of Objects Made from Right Rectangular Prisms

### FOCUS

- Determine the surface areas of composite objects made from cubes and other right rectangular prisms.

These cube houses were built in Rotterdam, Netherlands. Suppose you wanted to determine the surface area of one of these houses. What would you need to know?



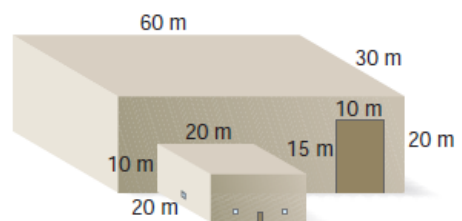
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### Example 3

### Solving Problems Involving the Surface Area of a Composite Object

a) Determine the surface area of the building.

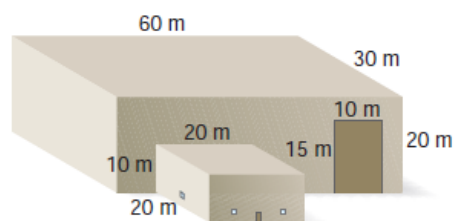
**SOLUTION:**



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**Example 3****Solving Problems Involving the Surface Area of a Composite Object**

b) A contractor quotes to paint the exterior of the building at a rate of \$2.50/m<sup>2</sup>. These parts of the building are not to be painted: the 2 roofs; the office door with area 2 m<sup>2</sup>; 3 loading doors, each measuring 10 m by 15 m; and 4 windows on the office, each with area 1 m<sup>2</sup>. How much would it cost to paint the building?

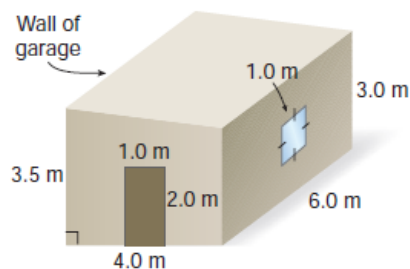
**SOLUTION:**

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**YOU TRY!**

a) What is the surface area of the shed, not including its door and window?

The shed has a sloping roof

**SOLUTION:**

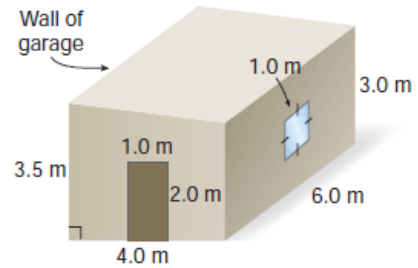
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## YOU TRY!

b) The shed is to be painted with 2 coats of paint. Paint costs \$3.56/L. One litre covers  $10 \text{ m}^2$ . What will it cost to paint the shed?

**SOLUTION:**

The shed has a sloping roof



Nov 24-2:41 PM

## Discuss the ideas

3. In *Example 3*, why are the bases of the warehouse and office not included in the surface area?

Nov 24-3:03 PM

## Practice

Page 31 # 10, 11, 12ac